

Erratum: Canonical magnetic insulators with isotropic magnetoelectric coupling [Phys. Rev. B **88**, 121106(R) (2013)]

Sinisa Coh and David Vanderbilt
(Received 9 September 2014; published 8 October 2014)

DOI: [10.1103/PhysRevB.90.159903](https://doi.org/10.1103/PhysRevB.90.159903)

PACS number(s): 75.85.+t, 03.65.Vf, 71.15.Rf, 99.10.Cd

We thank Perez-Mato *et al.* [1] for correctly pointing out that there are 44 (not 30) space-group structures that meet our “simplicity” criteria and display an isotropic magnetoelectric coupling. We defined a “simple structure” to be one having a characteristic Wyckoff orbit specified by only a single free parameter.

Our omission of these 14 structures arose from a misunderstanding of the conventions used for listing the Wyckoff orbits in the *International Tables* and other databases. For a Wyckoff orbit with a single free parameter, this parameter is usually denoted by “*x*”; for two parameters, “*x*” and “*y*,” etc. Our computer script did not take into account the fact that a single free parameter is occasionally denoted as “*y*,” and as a result it missed those structures when reading from the database.

The remaining conclusions in the Rapid Communication are unaffected by this omission.

Table I lists all of the 44 simple structures with isotropic magnetoelectric coupling. For brevity the magnetic moments are not listed, but in all 44 cases the magnetic moments point in the direction of the atomic displacements. See also the corrected Supplemental Material [2].

TABLE I. Space groups and Wyckoff orbits of “simple structures” (see text) with isotropic magnetoelectric coupling. Structures in bold were omitted from the original version of the Rapid Communication.

198	<i>4a</i>	199	<i>12b</i>	199	<i>8a</i>	200	<i>6f</i>
204	<i>12e</i>	205	<i>8c</i>	206	<i>24d</i>	206	<i>16c</i>
208	<i>12k</i>	210	<i>48g</i>	211	<i>24i</i>	212	<i>12d</i>
212	<i>8c</i>	214	<i>24g</i>	214	<i>24f</i>	214	<i>16e</i>
215	<i>4e</i>	216	<i>16e</i>	217	<i>8c</i>	220	<i>24d</i>
220	<i>16c</i>	221	<i>12i</i>	221	<i>12h</i>	221	<i>8g</i>
221	<i>6e</i>	223	<i>24j</i>	223	<i>12g</i>	224	<i>24i</i>
224	<i>8e</i>	225	<i>48h</i>	225	<i>32f</i>	225	<i>24e</i>
227	<i>96h</i>	227	<i>48f</i>	227	<i>32e</i>	228	<i>96g</i>
229	<i>48i</i>	229	<i>24h</i>	229	<i>24g</i>	229	<i>16f</i>
229	<i>12e</i>	230	<i>48g</i>	230	<i>48f</i>	230	<i>32e</i>

[1] J. M. Perez-Mato, Samuel V. Gallego, E. S. Tasci, L. Elcoro, and M. I. Aroyo, *Phys. Rev. B* **90**, 167101 (2014).

[2] See Supplemental Material at <http://link.aps.org/supplemental/10.1103/PhysRevB.90.159903> for a list of 44 simplest structures allowing for a isotropic ME coupling.